

## ABSTRACT OF THE DISCLOSURE

A regulation apparatus for ATM cell delay variation includes a variation regulating buffer for temporarily storing cells, a variation waiting timer for controlling a waiting time to read-out cells from the buffer, a read-out timer for controlling intervals at which cells are read from the buffer, a latest cell preservation memory for storing the latest cell transferred from a VPI/VCI and a selector for selecting a cell stored in the buffer to transfer the cell to a cell reproduction unit. The invention further includes a communication type discriminator for discriminating a communication type in a call set-up phase of a communication and for calculating a variation waiting time based on the discrimination to set the calculated variation waiting time to the variation waiting timer, and a dummy cell inserting circuit for inserting the last reaching cell as a dummy cell if a cell delay time cannot be regulated by the variation waiting time.